

# PATENT ABSTRACTS OF JAPAN

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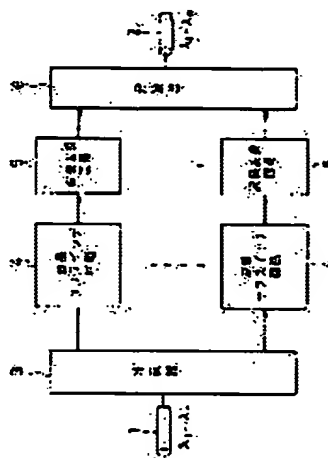
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## (54) LIGHT SWITCHING DEVICE

### (57)Abstract:

**PURPOSE:** To easily execute the wavelength conversion of a light signal in which a wavelength multiplicity is large by switching wavelengths in a group by means of a wavelength subswitch circuit and converting the wavelengths between the groups by means of a wavelength converting circuit.

**CONSTITUTION:** The title device is equipped with a wave-separating device 3 to separate a light signal, in which n-number of wavelengths in an input highway 1 and multiplexed, into m-number of wavelength groups, wavelength subswitch circuits 4 to execute the wavelength conversions in the m-number of wavelength groups, respectively, wavelength converting circuits 5 to be located before or after the wavelength subswitch circuits 4, and a multiplexer 6 to multiplex the outputs of the wavelength converting circuits 5 or the outputs of the subswitch filters 4 and to send them to an output highway 2. The separation into the wavegroups is executed so that the wavelengths can be within a wavelength range in which they can be processed by the wavelength subswitch circuits 4 and wavelength converting circuits 5, even when the wavelength-multiplicity is large. Thus, the light signal of a certain wavelength of the input highway 1 can be outputted by being converted to the light signal of the other arbitrary wavelength of the output highway 2.



## LEGAL STATUS

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審査請求 未請求 請求項の数 1 (全9頁)

⑮ 発明の名称 光交換装置

⑯ 特 願 昭63-8426

⑰ 出 願 昭63(1988)1月20日

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明 細 書

1 発明の名称

光交換装置

2 特許請求の範囲

波長多重された入力ハイウェイ(1)と出力ハイウェイ(2)との間で波長変換による交換処理を行う光交換装置に於いて、

前記入力ハイウェイ(1)に於ける多重化されたn個の波長をm個( $m < n$ )の波長群に分離する分波器(3)と、

前記m個の波長群内でそれぞれ波長変換する波長サブスイッチ回路(4)と、

該波長サブスイッチ回路(4)の前置又は後置の波長変換回路(5)と、

該波長変換回路(5)又は前記波長サブスイッチ回路(4)の出力を合波する合波器(6)とを備えた

ことを特徴とする光交換装置。

3 発明の詳細な説明

(概要)

波長多重された光信号の交換を行う光交換装置に関し、

波長多重度を容易に大きくできるようにすることを目的とし、

波長多重された入力ハイウェイと出力ハイウェイとの間で波長変換による交換処理を行う光交換装置に於いて、前記入力ハイウェイに於ける多重化されたn個の波長をm個( $m < n$ )の波長群に分離する分波器と、前記m個の波長群内でそれぞれ波長変換する波長サブスイッチ回路と、該波長サブスイッチ回路の前置又は後置の波長変換回路と、該波長変換回路又は前記波長サブスイッチ回路の出力を合波する合波器とを備えて構成した。

(産業上の利用分野)

本発明は、波長多重された光信号の交換を行う光交換装置に関するものである。

光ファイバ伝送路により、動画情報等の高速大容量の情報の伝送が行われている。この場合の光

Our Ref. OP898-US

(Translation)

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**NOTICE OF REASON FOR REJECTION**

Patent Application No. 10-368805

Date of Drafting this Notice: March 8, 2004

Patent Office Examiner: Shigehito MIYATA

Attorneys of the Applicant: Tsutomu TOYAMA, et al. (1 other)

Applied Provisions of Patent Law: Article 29, Paragraph 2.

This application is to be rejected by the following reason. If the applicant has any arguments, such arguments should be filed within 60 days from the mailing date of this Notice.

**REASON**

The inventions of the below listed claims of this application are unpatentable under the provisions of Article 29, Paragraph 2 of Patent Law, since the inventions could have been easily made by one of ordinary skill in this art based on the inventions described in the publications listed below which were distributed in Japan or in foreign countries prior to the filing of this application.

Notes (See the cited documents listed at the end)

Claims: 1 and 2

Cited Documents: 1 and 2

Remarks:

In comparing the configuration of the present invention with that of the cited document 1, they are different in that in the cited document 1 the "station-to-station optical transfer path" is not in plural, and the feature of "inter-station optical transfer paths" is not described.

However, a switching circuit having a plurality of station-to-station optical transfer paths and a switching circuit which performs routing of the station-to-station optical transfer paths are already known as disclosed, for example, in the cited document 2 (see particularly Fig. 4).

Further, no particular difficulty is seen in multiplexing the inter-station optical transfer paths.

Accordingly, the invention of this application could have been easily made by one of ordinary skill in this art based on the art disclosed in the cited document 1.

Claims: 3 and 4

Cited Documents: 1 and 2

Remarks:

Whether to first divide the inputted wavelength-multiplexed signal into desired wavelength groups, and, thereafter input them into routing means as disclosed in the cite document, or the inputted wavelength-multiplexed signal is first inputted into the routing means, and, thereafter, fetches the required wavelength group by a filter circuit provided in the routing means, is a matter that can be selected appropriated by one of ordinary skill in this art.

Claims: 5-10

Cited Documents: 1 and 2

Remarks:

None of the configurations recited in Claims 5-10 is technically remarkable.

If a new reason for rejection is found, a further Notice of Reason for Rejection will be issued.

#### List of Cited Documents

1. Japanese Patent Laid-Open Publication No. Hei 01-185093
2. Japanese Patent Laid-Open Publication No. Hei 06-303192

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